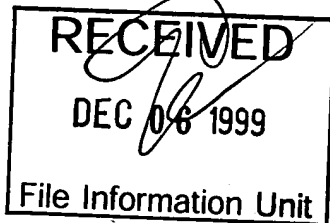


## REQUEST FOR ACCESS OF ABANDONED APPLICATION UNDER 37 CFR 1.14(a)



In re Application of

Application Number

07/310252

Filed

2/13/89

Class Art Unit

186

Examiner

Feisee

Paper No. 28

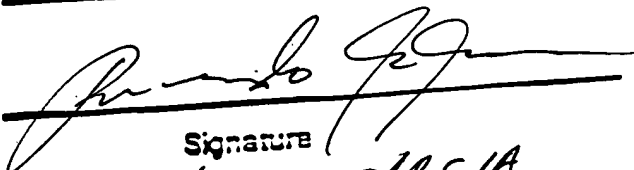
Assistant Commissioner for Patents  
Washington, DC 20531

I hereby request access under 37 CFR 1.14(a)(3)(vi) to the application file record of the above-identified ABANDONED application, which is: (CHECK ONE)

- ☒ (A) referred to in United States Patent Number 5530101, column \_\_\_\_\_
- ☐ (B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11, i.e., Application No. \_\_\_\_\_, filed \_\_\_\_\_, on page \_\_\_\_\_ of paper number \_\_\_\_\_
- ☐ (C) an application that claims the benefit of the filing date of an application that is open to public inspection, i.e., Application No. \_\_\_\_\_, filed \_\_\_\_\_, or
- ☐ (D) an application in which the applicant has filed an authorization to lay open the complete application to the public.

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Unit: \_\_\_\_\_

**United States Patent** [19]  
**Queen et al.**

US005530101A

[11] **Patent Number:** **5,530,101**  
[45] **Date of Patent:** **Jun. 25, 1996**

[54] **HUMANIZED IMMUNOGLOBULINS**

- [75] Inventors: **Cary L. Queen**, Los Altos; **Harold E. Selick**, Belmont, both of Calif.  
[73] Assignee: **Protein Design Labs, Inc.**, Mountain View, Calif.  
[21] Appl. No.: **634,278**  
[22] Filed: **Dec. 19, 1990**

**Related U.S. Application Data**

- [63] Continuation-in-part of Ser. No. 590,274, Sep. 28, 1990, abandoned, and a continuation-in-part of Ser. No. 310,252, Feb. 13, 1989, abandoned, which is a continuation-in-part of Ser. No. 290,975, Dec. 28, 1988, abandoned.  
[51] Int. Cl.<sup>5</sup> ..... **A61K 39/395; C07K 16/28**  
[52] U.S. Cl. .... **530/387.3; 530/387.1; 530/388.22; 424/133.1; 424/143.1**  
[58] Field of Search ..... **424/85.8, 133.1, 424/143.1; 530/387, 388.22, 387.1, 387.3**

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[57]

**ABSTRACT**

Novel methods for producing, and compositions of, humanized immunoglobulins having one or more complementarity determining regions (CDR's) and possible additional amino acids from a donor immunoglobulin and a framework region from an accepting human immunoglobulin are provided. Each humanized immunoglobulin chain will usually comprise, in addition to the CDR's, amino acids from the donor immunoglobulin framework that are, e.g., capable of interacting with the CDR's to effect binding affinity, such as one or more amino acids which are immediately adjacent to a CDR in the donor immunoglobulin or those within about 3 Å as predicted by molecular modeling. The heavy and light chains may each be designed by using any one or all of various position criteria. When combined into an intact antibody, the humanized immunoglobulins of the present invention will be substantially non-immunogenic in humans and retain substantially the same affinity as the donor immunoglobulin to the antigen, such as a protein or other compound containing an epitope.

**13 Claims, 55 Drawing Sheets**